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SURFACE MODIFICATION OF SILICA IN AN AQUEOUS ENVIRONMENT

ABSTRACT OF THE DISCLOSURE

The present invention is drawn to a method of treating silica in an aqueous environment. The method can comprise steps of dispersing silica particulates in an aqueous environment to form an aqueous dispersion; reversing the net charge of a surface of the silica particulates from negative to positive using a surface activating agent, thereby forming surface-activated silica particulates dispersed in the water; and contacting the surface-activated silica particulates with organosilane reagents to form reagent-modified and surface-activated silica particulates.